

Translation

PATENT COOPERATION TREATY

REC'D 25 APR 2006

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PCT

From the
INTERNATIONAL SEARCHING AUTHORITY

To: 100083

7th Floor, Xueyuan International Tower, No. 1
Zhichun Road, Haidian District, Beijing
DEQI INTELLECTUAL PROPERTY LAW CORPORATION

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43 *bis*.1)

Date of mailing

20 APR 2006 20 - 04 - 2006

Applicant's or agent's file reference

DF0507214P

FOR FURTHER ACTION

see paragraph 2 below

International application No.

PCT/CN2006/000044

International filing date (day/month/year)

12 Jan. 2006 (12. 01. 2006)

Priority date (day/month/year)

12 Jan. 2005 (12. 01. 2005)

International Patent Classification (IPC) or both national classification and IPC

H04Q 7/30 (2006. 01) i

Applicant

HUAWEI TECHNOLOGIES CO., LTD ET AL

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/CN

The State Intellectual Property Office, the
P.R.China 6 Xitucheng Rd., Jimen Bridge,
Haidian District, Beijing, China 100088
Facsimile No. 86-10-62019451

Date of completion of this opinion

10 Apr. 2006 (10. 04. 2006)

Authorized officer



Telephone No. 8610-62084576

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/CN2006/000044

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed
☐ filed together with the international application in electronic form
☐ furnished subsequently to this Authority for the purposes of search

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/CN2006/000044

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement:

Novelty (N)	Claims	1-46	YES
	Claims		NO
Inventive step (IS)	Claims	1-46	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-46	YES
	Claims		NO

2. Citations and explanations

The present invention relates to a separated base station system includes: separated baseband units (BBUs) of BSs and separated radio frequency units (RFUs) of BSs, and baseband-radio frequency interfaces provided on the RFUs which are connected with the BBUs and transmit data information.

The following documents are cited here:

D1: US 6058317 A

D2: CN 1284824 A

D3: JP 2004040802 A

D1 discloses a radio system base station comprising CPU with at least one baseband frame unit for supplying baseband signals via switch to either of two radio channel units and radio set units which are separate from one another.

D2 discloses a Pico-BTS (Base station Transceiver Subsystem) comprising Pico-BTS architecture divided into Pico-BTS main Unit and Pico-BTS radio unit. The Pico-BTS is located at base of a pole, tower or support and it transmits and receives signals through mounted antenna and communicates with Pico Main Unit via wires or coaxial cable.

D3 discloses a base station system for mobile communication, comprising remote RF unit hub that receives and distributes frames transmitted by digital modem unit to RF units through Ethernet using twisted pair cable. The system has a digital modem unit to receive a signal framed on a format with a preset remote radio frequency (RF) unit frame and transmits set of frames over an Ethernet using a twisted pair cable. A remote RF unit hub receives and distributes the frames to RF units via the Ethernet using the cable. The RF units deframe the frames, modulate the deframed signal to an RF signal and transmit to a mobile terminal.

It is obvious that not all the technical features in claim 1, 16 and 34 are disclosed by D1, D2 or D3, therefore, claim 1, 16 and 34 have novelty under PCT Article 33(2). And not all the technical features in claim 2-15,17-33 and 35-46 are disclosed by D1, D2 or D3, therefore, claim 2-15,17-33 and 35-46 have novelty under PCT Article 33(2).

Claim 1-46 are not obvious to a person skilled in the art on the basis of D1, D2 or D3 or their combination, thus they have inventive step under PCT Article 33(3).

Claim 1-46 have industrial applicability under PCT Article 33(4), because the method claimed can be used in industry.